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Common Knowledge about the Loch Ness Monster: Television, Videos, and Films

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Abstract—Seventeen documentary films and videos about the Loch Ness Monster (Nessie) have been produced since 1972 for English-speaking audiences. All but two of them fail to do justice to the objective scientific evidence of film, sonar, and underwater photography with simultaneous sonar detection. Moreover, the programs promulgate numerous errors of fact and of interpretation. The view as to whether Nessies are real was more accepting in the 1970s and more dismissive in the 1990s.

Keywords: Loch Ness Monster—public knowledge about the Loch Ness Monster—television—documentaries—public knowledge about anomalies

Introduction

Common knowledge—in other words, what is generally or widely known—is promulgated through formal education and by the media. On subjects that formal education ignores, for example, anomalistic topics, the effect of media coverage must be correspondingly greater. This essay examines the purported knowledge about Loch Ness Monsters (Nessies) purveyed by film and television documentaries.

Newspaper coverage of Nessies has been sporadic and often jocular, and has predominantly cast the Monster as mythical. No change in that view has been apparent since the 1930s, when Nessies first became internationally famous. By contrast, in many magazines and books the subject began to be taken somewhat seriously from the 1960s, at least for two or three decades. In recent years the tone has become more dismissive again (Bauer, 1982. 1987a, 1988). (A further illustration of this is in the last line of Table 2.)

Common knowledge does not take Nessies seriously; up to the 1970s or 1980s at least, it was evidently influenced more by newspapers than by books or magazine articles. Nowadays the print media may have less effect on public knowledge about Nessies than does television, with the huge audiences it commands. Since the 1970s, 17 television programs[1] (Table 1) devoted entirely or largely to the Loch Ness Monster have been broadcast, as well as numerous shorter pieces. (Only documentary programs are considered in this essay. Nessie has also been a significant participant in several commercial

TABLE 1
Films and Videos Dealing Chiefly with the Loch Ness Monster

Reference number	Date	Title	Produced by or broadcast by	Length (hours)[a]
XVII	2001	*Loch Ness: Search for the Truth*	LEARNING Channel	1
XVI	2000	*World' s Best: Monster Mystery—Loch Ness*	TRAVEL Channel	1
XV	1999	*Lake Monsters*	DISCOVERY Channel (BBC Scienceworld/Worldwide)	½
XIV	1998	*Beast of Loch Ness*	NOVA (PBS)	1
XIII	1998	*In Search of Historv (also shown as "Incredible but True"): The Loch Ness Monster*	HISTORY Channel (MPH Entertainment)	1
XII	1998	X *Creatures: Giant Squid & Loch Ness Monster*	DISCOVERY Channel (BBC)	½ of 1[b]
XI	1996	*Great Mysteries of the 20th Century: Loch Ness*	LEARNING Channel (Thames International)	½
X	1994	*Ancient Mysteries: The Loch Ness Monster*	A&E Channel (ITN)	1
IX	1993	*Loch Ness Discovered*	DISCOVERY Channel (Yorkshire TV)	1
VIII	1991	*The Loch Ness Monster Story*	North Scene Video[c]	1
VII	1989	*Loch Ness: Mystery of the Deep*	WEST 57th (Selina Scott)	¼
VI	1987	*Secrets & Mysteries*	A&E Channel (ABC video)	½
V	1980	*Monsters of the Lake (Arthur C. Clarke' s Mysterious World)*	Yorkshire TV	½
IV	1976	*In Search Of*	Alan Landsburg	½
III	1976	*The Legend of the Loch*	Richard Martin[d]	2
II	1974	*Monsters! Mysteries or Myths?*	David L. Wolper (Smithsonian)	½ of 1[b]
I	1972	*Man, Monsters and Mysteries*	Walt Disney[d]	½

[a] Nominal length, which typically includes advertisements approximating 12-18 minutes per hour.
[b] One third or one half, respectively, of the program concerned the Loch Ness Monster.
[c] Produced as commercial video.
[d] Produced for showing as commercial film, subsequently broadcast on television.

entertainment films, and no doubt the public image of the Loch Ness Monster has been somewhat influenced by those, despite their obviously fictional themes. That realism was not aimed for in these films may be illustrated by the fact that one of the most recent [2] was filmed largely at Diabaig on Loch Torridon on the Western coast of Scotland, because the film' s producers felt that Loch Ness itself looked insufficiently like Loch Ness for their purposes.)

Reporting the Objective Evidence

The strongest objective evidence that Nessies are real animals is described in Bauer (2002). It comprises:

- The Dinsdale film of 1960. A large hump moves in a curving path, submerging after a time but continuing to throw up a massive wake.
- Frequent apparent detection by sonar, beginning in 1954, of large, often moving, mid-water targets.
- Underwater photography of a large flipper with simultaneous sonar detection in 1972.

Table 2 shows how the documentaries have dealt with this evidence, all of which was available to all the programs listed in Table 1 with two exceptions: **I** (1972) could not include the flipper, and **I–V** could not include the striking sonar results of 1980—40 substantial contacts during one summer (LN&MP, 1983)—or the three strong contacts recorded during a major sonar sweep of the loch (Operation DeepScan) in 1987 (Bauer, 1987b; Dash, 1988).

The Dinsdale film has three salient sequences: (1) initially, the curving path of a large hump, moving away and to the right; (2) then, a narrowing of the wake as the hump submerges, with momentary appearance of a smaller second hump; (3) finally, a large wake moving right-to-left with nothing visible above the water line. In Table 2, **TD1** reports 1/3, 2/3 or full (✓) reproduction of these three segments of the film. **TD2** denotes whether or not a meaningful portion of enlarged film was shown[3]. The film was authenticated by Britain' s Joint Air Reconnaissance Intelligence Centre (JARIC) in 1965 (James, n.d.) and by several later groups using computer techniques; **TDC1** reports whether or not such authentication was mentioned. The hump, although large, looks small when the 16-mm film is shown full frame; **TDC2** reports whether or not the accompanying commentary pointed out that the hump is of substantial size (about 3 feet high by 5–6 feet wide at the water-line). Dinsdale filmed a boat for comparison with the hump, and the wakes of the two are distinctly different (**TDC3**). It is worth noting that the hump submerged while continuing to throw up a wake (**TDC4**), that a second hump appeared briefly (**TDC5**) and that in the third segment of the film, there are periodic splashes rather like oar-strokes to the side of the wake (**TDC6**).

Sonar has frequently picked up large underwater moving objects (observed by no fewer than 20 separate expeditions since 1954) (**S1**). It is worth noting (**SC1**) that this constitutes a respectable degree of reproducibility: at least half of the sonar ventures to date have reported such contacts. It is also significant (**SC2**) that sonar contacts have been recorded by a variety of instruments, both fixed and moving, with various types of beams and frequencies, so that it is quite unlikely that the contacts were all generated by artefacts as opposed to large moving underwater objects.

There were two flipper photographs obtained in 1972 (**UW1**) and simultaneously the sonar recorded very large targets (**UW2**). The general shapes of the flippers are visible on the original film transparencies (**UWC1**). The somewhat different flipper shapes were obtained about a minute apart, consistent with motion (**UWC2**)—perhaps a single appendage at different angles, or

TABLE 2
Extent to which Positive Objective Evidence about the Loch Ness Monster has been Presented in Films and Television

in video#	**I** 1972	**II** 1974	**III** 1976	**IV** 1976	**V** 1980	**VI** 1987	**VII** 1989	**VIII** 1991	**IX** 1993	**X** 1994	**XI** 1996	**XII** 1998	**XIII** 1998	**X** 19
detailed evidence														
TD1	1/3	2/3	2/3	1/3[c]	2/3	2/3		2/3	2/3	✓	2/3		✓	2
TD2		✓	✓	✓[c]	2/3	✓		✓			✓		✓	
TDC1	≈	✓	✓	✓	✓			**x**	✓		≈		✓	
TDC2	✓				✓	≈		≈					✓	
TDC3					≈	**x**[d]		✓		≈	**x**		**x**	
TDC4								≈						
TDC5														
TDC6														
S1	✓[a]	✓[a]	[a]	[a]	≈[a]		≈	✓	≈	≈	**x**		**x**	
SC1	[a]	[a]	[a]	[a]	[a]			✓						
SC2	[a]	[a]	[a]	[a]	[a]			✓						
UW1	n.a.[b]	1/2			✓	✓	1/2	≈	1/2		1/2		✓	3
UW2	n.a.[b]	✓				≈		✓					✓	
UWC1	n.a.[b]					**x**		≈	≈					
UWC2	n.a.[b]							≈					✓	
UWC3	n.a.[b]							✓					✓	
UWC4	n.a.[b]	n.a.[b]	n.a.[b]	n.a.[b]	n.a.[b]	≈		**x**	**x**				**x**	
fraction of significant points not included	2/3	2/3	4/5	4/5	1/2	1/2	9/10	1/8	2/3	4/5	2/3	ALL	1/3	1
predominant tone[e]	**?**	**?–**	**+**	**+**	**?–**	**+**	**–**	**?**	**?**	**?**	**–**	**–**	**?**	**?**

Note: Shaded area [[***not shaded in this scanned version, just left blank***]] in Table 2 indicates items not even mentioned. Fractions show how much or little of the material was shown. ✓ Indicates satisfactory coverage; ≈ indicates barely mentioned, not fully explicated; **x** indicates coverage is erroneous or seriously misleading.

[a] Some results available but not the significant ones of the early 1980s.

[b] Not available at the time the film was made.

[c] Reversed from original as though moving from left to right.

[d] Shots of the control boat arc shown *as though this were the monster.*

[e] "Do Nessies exist' ?" + = yes; ? + = possibly; ? = who knows?; ?– = probably not; – = definitely not. **TD1 = How much** of the film is shown?; **TD2 =** Was **magnified** section shown?; TDC1 = its authenticity is supported by expert examination (James, n.d.) or by computer-enhancement; **TDC2** = the hump is of **substantial size** (3 feet high by 5½ = feet wide); **TDC3 =** a **boat** was filmed as **control;** hump' s wake is **unlike boat; TDC4 = hump submerges** while continuing to throw up a wake; **TDC5 =** a **second hump** is briefly visible: **TDC6** = there are **periodic splashes** at the side, similar to oar strokes; **Sl = Frequent success** (about 20 occasions with positive sonar contact since 1954): **SC1 = Good reproducibility:** significant echoes recorded by about 50% of expeditions; **SC2** = Variety of sonar instruments used, fixed and moving, so echoes are unlikely to be artefacts; **UWl =** Were **both** flippers shown?; **UW2** = Was chart of simultaneous sonar echoes shown?; **UWC1 = Flipper** shape is visible **on original frame of film; UWC2** = two shots less than a minute apart **consistent with motion; UWC3 = massive sonar echoes** compared to those from fish; **UWC4 =** re-touched? (sometimes alleged since 1984); ✓ = NOT; ≈ = who

a front and a hind limb, or the limbs of two separate creatures, since the sonar chart indicated that there were two large objects present. The sonar chart shows many echoes from fish in straight paths as well as the massive, dense echoes from larger objects (**UWC3**), consistent with fish fleeing a large predator. There have been persistent claims that published flipper photos have been retouched (**UWC4**).

The shaded portions [[***blank in this scanned version***]] of Table 2 show which of these significant evidential details were omitted in the several documentaries. Overall, about two thirds of the Table is shaded [[***blank in this scanned version***]]: more likely than not, in other words, viewers of these programs were not given the information needed to arrive at an informed opinion. The most damaging omissions are that all three segments of Dinsdale' s film, and both underwater flipper photos, were rarely shown (in only 2 and 3 of the 17 programs, respectively). Even when a given point was discussed in sufficient detail, however, viewers could not be assured that the information was reliable: about 20% of the time it was significantly incorrect (**x**).

Only 3 **programs—VIII, XIII, XIV—**displayed most of the objective evidence. However, it should be added that **I** was produced primarily for children, is very accurate about what it does show, and remains well worth viewing by audiences of any age from primary school up[5]. **XIII,** on the other hand, counterbalances its good coverage by getting 3 important points quite wrong. I would recommend only **VIII and XIV. XIV** is a NOVA production, and it supports the good reputation those programs enjoy. **VIII** is a commercial video whose script was prepared by Tony Harmsworth, resident at Loch Ness for two decades and founder of what was for more than a decade an excellent Loch Ness Monster Exhibition at the Drumnadrochit Hotel.

Both of the recommended videos are neutral as to whether Nessies exist. Neither confirmed believers nor disbelievers should be content with the programs that largely project their own viewpoint. The predominantly believing ones (**III**, **IV**, **VI**) omit on average more than 70% of the strongest objective evidence. The disbelieving ones (**VII, XI, XII, XV, XVII**) are even worse; though they typically purport to take a "scientific" stance, they allowed viewers to be aware of only about 15% of the strongest objective—in other words scientific—evidence of sonar, film, and photography coupled with sonar. In program **X**, a featured scientist explains that eyewitness testimony is personal, one can never be sure of its validity, science needs reproducible data. At this point it would have been natural to mention that sonar gets significantly reproducible results; but that is not done, and the video fails even to mention 80% of the objective data.

Reporting the Evidence in General

Not everyone will agree with my selection of what is the strongest objective evidence. Perhaps some other mode of assessing these documentaries would rate them less unfavorably than in Table 2?

In point of fact, most of the programs contain numerous factual inaccuracies. Some of these may be on quite minor points, and need not in themselves prevent viewers from reaching a reasonable opinion. Nevertheless, inaccuracies that could have been prevented by moderately sound research undercut the credibility of the whole production, irrespective whether one is agnostic, a believer, or a disbeliever. Careless research is illustrated by the following:

- Assertions that Loch Ness is "honeycombed with crevices and caves" (**VI**, **X**), which may be connected to others lochs or to the sea (**III**, **X**); that the loch is 900 feet deep (**II, V, VII, XVII**), or that no one knows how deep it is (**IV**); that Loch Morar lies "just above Loch Ness" (**IV**)—in reality it is roughly 40 miles to the west and 20 miles to the south.
- Allowing to go uncontradicted clear errors by people interviewed for the program. Thus in **X**, made in 1994, the proprietor of the Drumnadrochit Hotel and owner of the "Official" Loch Ness Monster Exhibition served himself shamelessly by asserting that science was now taking an interest only because the Exhibition had been throwing people and money at the quest for 20 years. In fact the Exhibition had been founded only a decade earlier, and the funds given for research were a very small part of the Exhibition' s profits.
- Stating that several coelacanths were caught in the 1930s (**XI**)—but only the first was recognized in 1938, the second turned up in 1952.
- Describing St. Columba' s encounter with the Monster as at Loch Ness (**I, X, XVII**) when actually it was at the *River* Ness; stating that the swimmer on that occasion was not merely attacked but actually "devoured" by the Monster (**III**).
- Confusing details of the Mackay sighting in May 1933 from the western shore of the loch, which instigated the subsequent furor, with the report by the Spicers a couple of months later, of seeing something large and monstrous crossing the road along the eastern shore (**XVI**).
- Showing the Lee-Adams photo (Figure 1) (**II, III, V, XIII**) as though it were pertinent, even though it was taken by a photographer whose identity is not known with any certainty, has no context to indicate that it was even taken at Loch Ness, and is almost universally regarded as spurious.
- Giving April 1 as the date (**IV**) for the Surgeon' s photo (Figure 2), said to have been taken by "Robert Wilson" (**XVII**) (instead of R. Kenneth Wilson, as he is described everywhere else). **XII** claims it was approved by NASA, perhaps a garbled version of the report (Witchell, 1974: 69) that it had been computer-enhanced at the Jet Propulsion Laboratory.
- Discussing searches made during the 1930s while showing vehicles obviously of later vintage, in point of fact the Loch Ness Investigation of the 1960s (**III**).
- John Cobb' s speed boat is shown exploding, but in a left-to-right run rather than right to left as in all other versions (**III**).

Fig. 1. Published in the *Daily Mail* (25 August 1934) and in the *Illustrated London News* (1 September 1934, 185: 315), with no photographic credit in either case. Photographer is named as Dr. James Lee (Witchell, 1974: 51) or as F. C. Adams (Mackal, 1976: 99).

- Describing Tim Dinsdale as a full-time monster hunter resident at Loch Ness (**II**) and that it was the proceeds from his film that gave him the means to hunt monsters full-time (**X**). In his books, Dinsdale described the freelance work he carried on in order to make possible his expeditions of several weeks or months to Loch Ness, once or twice a year.
- Showing the third segment of the Dinsdale film left-to-right instead of right to left (**IV**). Emphasizing shots of the boat Dinsdale had filmed as

Fig. 2. The Surgeon' s photo.

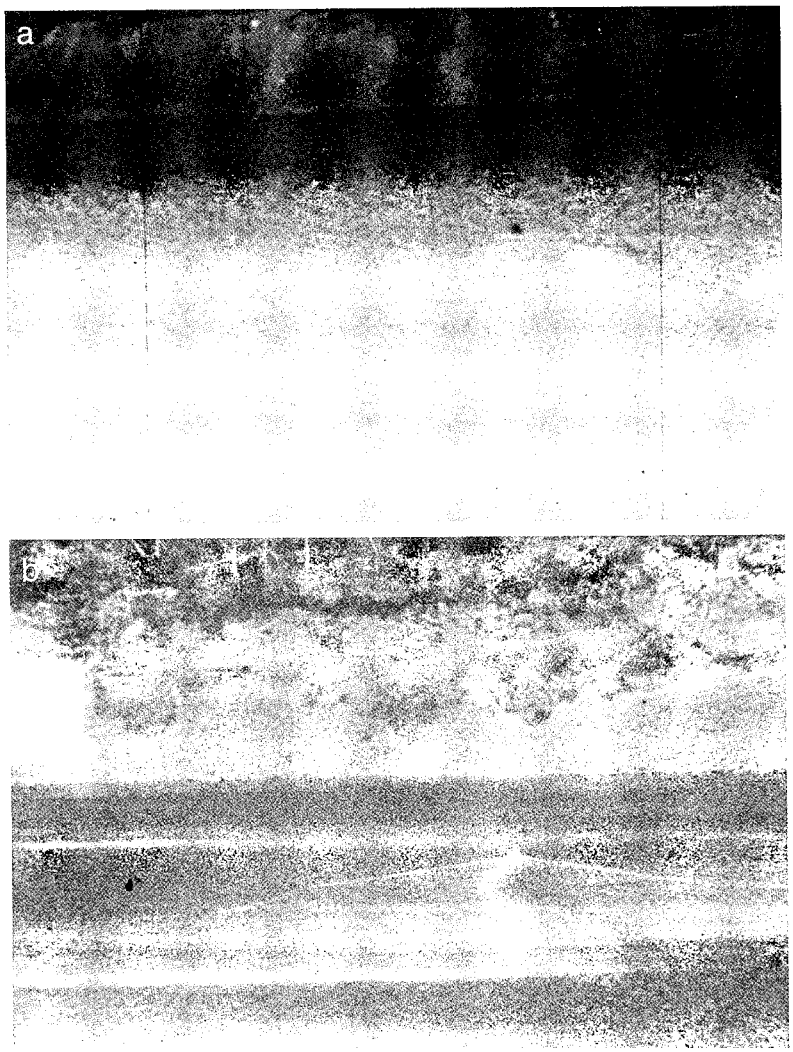


Fig. 3. Nessie hump (upper) and control boat (lower) from Dinsdale film. Reproduced by kind permission of Wendy Dinsdale.

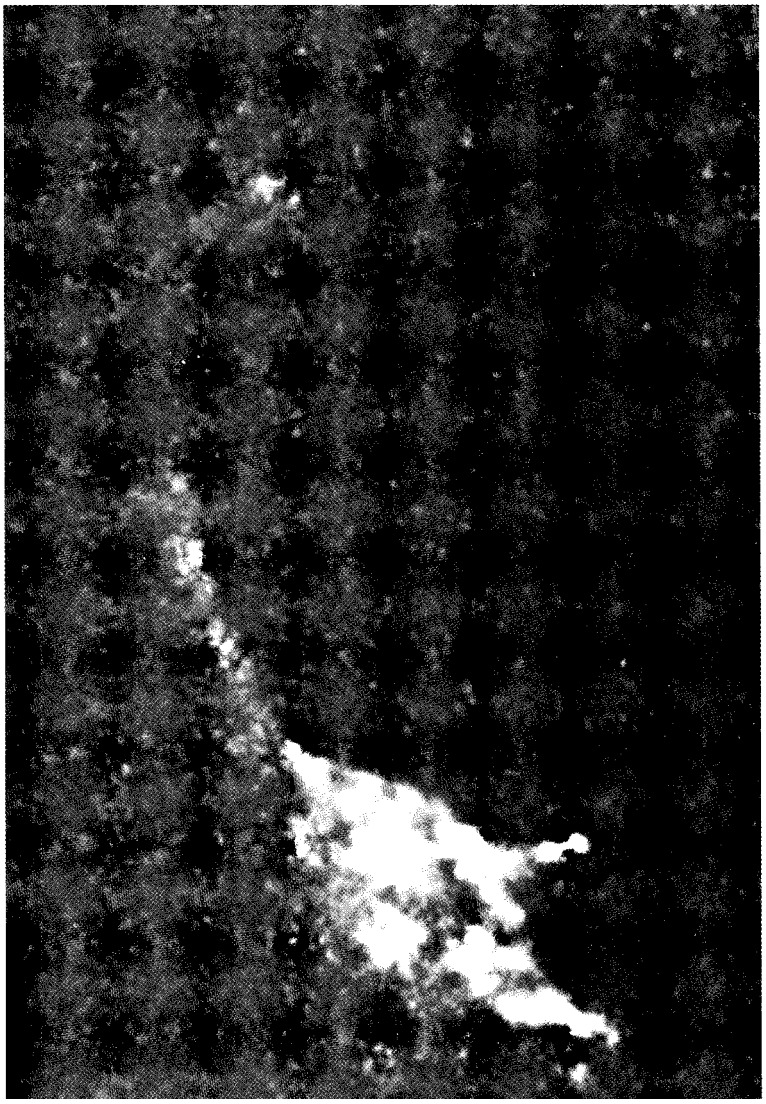
a control *as though it were the purported Nessie hump* (**VI**, **XIII**), which would give viewers an *entirely* wrong impression (Figure 3).

- Saying that it was Professor Mackal who carried out the underwater photography (**VIII**); that Robert Rines now has doubts about the validity of his underwater photos (**XIII**); that his original film from 1972 was lost (**VIII**).
- Showing Rines in connection with the ISCAN sonar array of 1983, which he had neither designed nor deployed (**VI**). In fact, the array was

Fig. 4. Most commonly reproduced flipper from 1972 underwater photography. Reproduced by kind permission of Robert Rines.

the work of people who criticized Rines' s work (Razdan & Kielar, 1984-85), making errors in the process (Rines et al., 1985).

- Frank Searle' s photos from the early 1970s were publicly exposed as fakes by Witchell (1974: 184 ff.). Nevertheless they are shown without comment in **VII**; in **III** they are even described as not retouched and it is claimed that the original negatives had been examined by the finest scientific labs in Europe and America.
- No one takes seriously the photos produced by stage magician and psychic Tony Shiel, yet they are shown without comment in several programs (**V, VII, XIII, XVII**). Another red herring is the snake-like protrusion from the water reproduced in **VI**.
- Talking about the "body-neck and flipper of 1975", when the latter was obtained in 1972 (**V**). Describing the second flipper, the more commonly shown one (Figure 4), as a "tail" (**V**). Calling the body-neck photo (Figure 5) a head with antenna (**VII**); in other words, confusing it with the "gargoyle" photo (Figure 6), which in another instance was said to have been enhanced to a flipper form (**XI**). In another case, the "twobody shot" (Figure 7) was said to have been enhanced to the flipper shape (**XVII**).
- Taking seriously the claim by Roger Parker (**V**) to have tracked on sonar for 1½ hours an animal larger than 43 feet with a 20-foot-long baby in its shadow, later making contact with two smaller creatures. The strength of



Fib. 5. 1975 “Body-neck” photo. Reproduced by kind permission of Robert Rines.

sonar echoes on that type of device cannot be taken as a measure of length—let alone so accurate a measure; viewers should have been told that.

Hyperbole may not be as serious as factual error, but it can significantly mislead, for example:

Fig. 6. 1975 "Gargoyle" photo. Reproduced by kind permission of Robert Rincs.

- Describing the loch' s peat-stained water as "black as soot" (**X**). How then could there by any underwater photography at all?
- Calling the mystery a riddle that has haunted human imagination for centuries (sic) and stimulated argument between believers and skeptics for that length of time (**X**); or that for centuries (sic) stories of strange creatures in rivers and lochs have stirred fears (sic) and imagination of residents and scientists (sic) alike (**XIII**).

Interpreting the Evidence

Careless factual research undercuts overall credibility, even if errors on minor matters need not prevent viewers of these programs from reaching reasonably informed views on the main question, whether or not Nessies could be real. Errors of interpretation of the evidence, however, are likely to have a more serious and insidious impact than minor errors of peripheral fact.

In general, these films give reasonably accurate accounts of the quest to identify the Loch Ness Monster. Most of them include informative and attractive scenic shots. Typically they present a good selection of eyewitnesses, but there are occasional lapses; in **XVI**, for instance, a woman and her daughter recount in too great detail their terror (sic) at the loud splashing noises they heard, even though they were not on the water and not even very close to the noise.

It is often alleged that Nessies were invented to drum up tourist business. This is hinted at in several videos which mention that the fuss in 1933 ensued

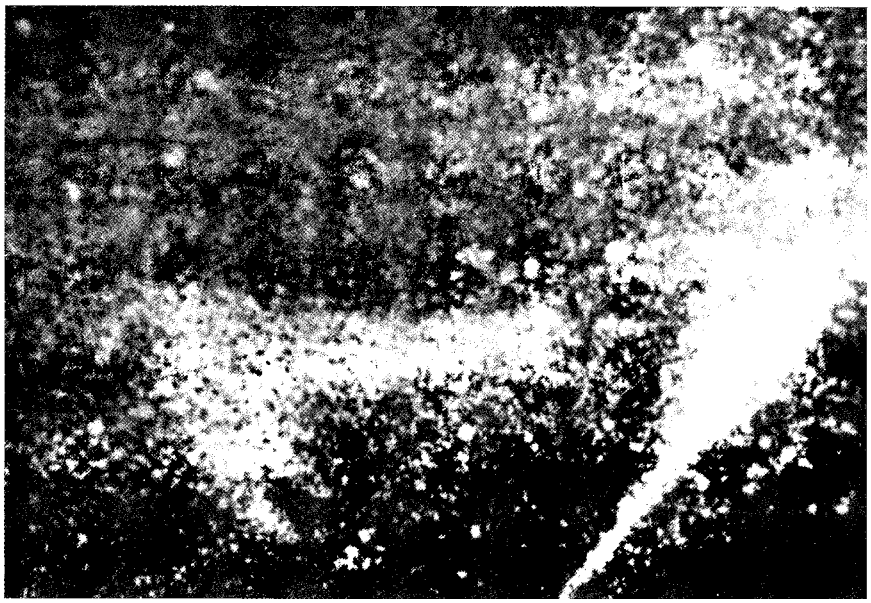


Fig. 7. 1972 “Two-body” photo. Reproduced by kind permission of Robert Rines.

after a sighting reported by Aldie Mackay and her husband, who had a local hotel. It is therefore a serious omission, an implicit error of interpretation, not to mention letters published in local papers about sightings in 1930, which are documented evidence that Nessies were being seen well before 1933.

A cornmon question is, “How could large animals possibly exist in this landlocked body of water when decades of intensive searches have been fruitless?” One part of the answer is that there have been no decades of intensive searches. There was the Mountain survey of a few weeks by a couple of dozen paid watchers in 1936. The longest and most organized search was by volunteers enrolled in the Loch Ness Investigation (LNI), for several weeks of each year for about 10 years beginning in the early 1960s. The Loch Ness & Morar Project monitored deep water for several months in the early 1980s. Most other searches have been conducted by individuals for varying lengths of time, perhaps intensive from an individual’ s point of view but certainly not from the loch’ s point of view. Tim Dinsdale was the most persistent Nessie seeker. He made about 40 expeditions, but was fully aware that he was seeking the lucky chance and not making a comprehensive search; he wondered sometimes whether he should have continued watching from land instead of gambling on a close encounter on the water. None of the films or videos is clear on this point, and several of them mislead by talking of intensive searches since the 1930s by team after team of dedicated hunters mounting 24-hour vigils with cameras (**XV**) or of 25 years of searches with submarines

(**X**). In similar vein, it is seriously misleading to describe Operation DeepScan in 1987 as having boats spread over the whole loch (**XV**), "the entire length and breadth of loch" (**XVI**): actually the sweep covered only about two thirds of the loch (**VIII**; Bauer, 1987b; Dash, 1988).

Several of the films (**IX, XI, XII, XIII, XV, XVII**) show fine examples of how deceptive waves and wakes on the water can be; **XV** also illustrates mirage effects nicely. On the other hand, in **X** there is shown a tourist' s video recorded in August 1992 that is said to look like an animal rolling over and over, with unnamed experts suggesting it was 25-30 feet long. A zoologist testifies to never having seen anything like it, that it may well be a large creature. Skeptic Steuart Campbell dismisses it as an interference pattern between two wakes. But people with some experience of actually watching at Loch Ness should have no difficulty identifying this as the single segment of a boat wake that has persisted while the other segments have died down, as happens not infrequently on calm water where the wakes roll far and endure a long time. Viewed approximately side-on to the wake-section' s motion, the shadow of the rolling wave can look remarkably like something solid. As Adrian Shine pointed out when this tourist video was shown on television (ITN in Britain, CNN in the United States), the important clue lies in the *repetitive* motion: whenever on water something repeats several times, most likely it is some sort of wave phenomenon. In **XVI**, an eyewitness describes a 1998 sighting that was captured on video, but the reproduced video is clearly a wake, presumably from a boat, and not the solid object described by the witness. In the same program, a tourist video rather clearly showing a seal is treated as though there were doubt about it. In **VI** there is yet another instance of showing an obvious wake while describing it as mysterious: a video filmed at Lake Okanagan is reproduced with excited voices in the background and the video' s commentary asks, "Is it a wave? a dog? the monster?" Again, in **XV** altogether too much is made of an indistinct filmed wake that looks more like birds than anything else.

In several of the videos (**IX, XV, XVII**), people—sometimes described as professional psychologists—deliver themselves of generalities about the unreliability of eyewitness testimony, but their remarks lack specific application to the special conditions at Loch Ness and do not address the range of experience and local knowledge represented by the cumulation of eyewitnesses. That cumulation is so weighty that even such disbelievers as Adrian Shine are convinced that people have seen in Loch Ness something large and powerful that they could not recognize. Many supposed sightings have, no doubt, been misperceptions of waves and wakes and birds and seals and so forth, but not such instances, quite numerous, as those involving multiple witnesses, sometimes from several different places around the loch. Moreover, in one of the programs (**XV**), students from Aberdeen University conduct an experiment and find that people were not taken in by a log being pulled through the water. In several of the videos, Ian Cameron makes the point, based on his

policeman' s approach, that his testimony was corroborated by a companion as well as by seven entirely independent witnesses on the opposite shore of the loch. Surely a discussion is called for, how to accommodate both of these opposing professional viewpoints, the policeman' s or lawyer' s and the psychologist' s, each of which—taken separately—seems rather convincing; but none of these programs offers such a needed discussion. One point that disbelievers could make in such a debate—but fail to do in any of these programs—is that one can watch equally convincing witnesses as in these videos tell, in countless television programs, about such sightings of the Mothman[6], or about abductions by aliens, channeling of spirits from elsewhere, and so forth.

Given all the doubts that surround eyewitness testimony—doubts that many people are familiar with even when these programs do not emphasize them—it is then seriously misleading to claim (**X**, **XV**) that eyewitness testimony is the strongest evidence for the existence of Nessies. As I have argued (Bauer, 2002), films, sonar, and simultaneous photography and sonar must be taken into account. One can dispute the authenticity or the significance of those items, but they cannot be dismissed as less evidential than personal testimonies. When an interviewed scientist proclaims eyewitness testimony as being of no scientific value (**X**), it would seem appropriate to present him for comment with these objective pieces of data that are available in recorded form for continued examination and analysis.

In similar vein, it is misleading to call the Surgeon' s photo, no matter that it is the best known, "the most famous unrefuted proof" (**X**) or "definitive proof" (**XV**) or "previously incontrovertible evidence" (**XIII**) of Nessie' s existence. That misdirection then gives far too much weight to the significance of the purported revelation that this photo was a hoax, particularly when it is coupled with the allegation—constructed out of whole cloth—that the Surgeon himself was so ashamed of his part in the hoax that he fled to Papua, New Guinea and died in exile in Australia (**X**). Surgeon R. Kenneth Wilson did emigrate to Australia, but he had done so decades before Boyd and Martin in the early 1990s publicized allegations of the hoax.

Proponents of Nessies like to cite the authentication by JARIC of the Dinsdale film. Disbelievers missed the opportunity in several of these videos to point out that JARIC had also claimed to see something of sizable dimension—5 to 9 feet long—momentarily break the surface in the Raynor film of 1967 (**VIII**, **XIII**), which actually shows a flock of birds, as Raynor himself has publicly stated since the early 1980s. Moreover in **XVI**, a former JARIC expert identifies as a log what is rather clearly a wave. The computer experts engaged for the Discovery program **IX** also fail to inspire confidence when they find in the Dinsdale film a "shadow" in the water behind the hump that is rather obvious already in the *unenhanced* still (Figure 8). It is not a shadow but rather a division in the hump' s wake, and probably indicates that there was a smaller object breaking the water in front of the hump but hidden by it at this angle of filming. Experience of actual watching at Loch Ness teaches

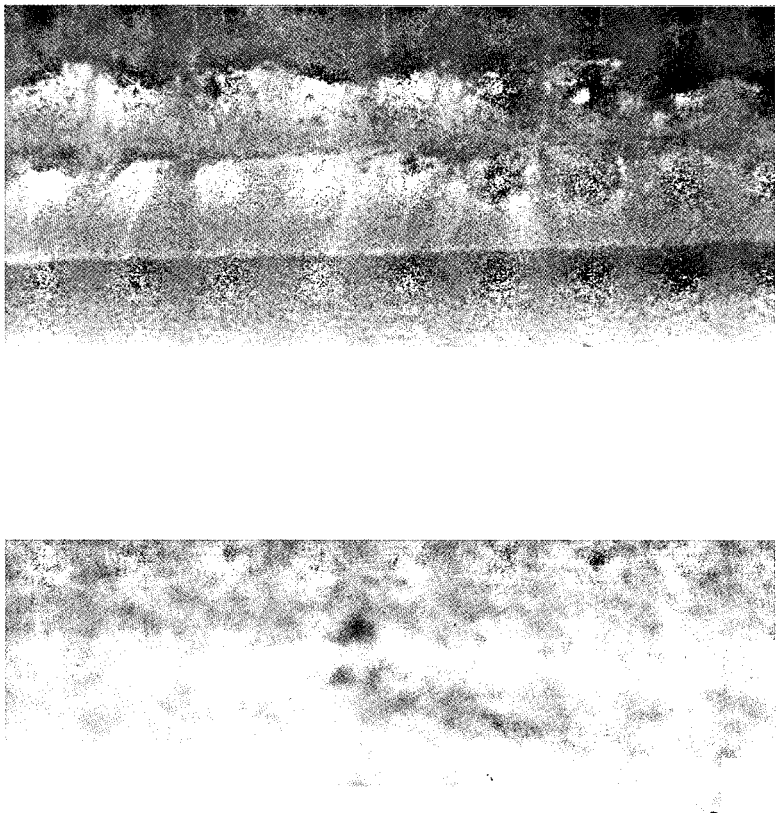


Fig. 8. Shadow behind the hump in the Dinsdale film, supposedly revealed by computer enhancement, is visible in the original unenhanced film and is actually undisturbed water between two wake arms. a) Slide supplied by Tim Dinsdale, reproduced by kind permission of Wendy Dinsdale. b) Contrast increased, giving the same effect as the reported computer enhancement.

that one rarely sees anything below the surface of the water, not even a "shadow" of it; only when one stands right at the shore, and in very shallow water, can one see anything of objects below the surface.

Many of the programs feature various experts, and some of them are allowed to get away with incompetent testimony, for example, the zoologist who thought a wave to be an animal (**X**). In other cases, experts venture conflicting opinions. The clear implication, which fails to be brought out in these programs, is that one cannot accept both opinions. For example, in **XV** the relevant expert from the British Museum says that the bony plates of a sturgeon are so distinctive that it could not be mistaken for anything else; yet the same program concludes that a giant sturgeon, as suggested by a Loch Ness expert, is the closest anyone has come to identifying the Monster!

PHOTOGRAPH OF THE LOCH NESS MONSTER TAKEN NEAR FOYERS
BY MR. HUGH GRAY, NOVEMBER 12, 1933

Fig. 9. The Gray photograph, taken 12 November 1933 by Hugh Gray and published in various newspapers a month later. This author follows Whyte (1957), Witchcll (1974) and others in regarding it as authentic.

Rather clear errors of interpretation if not of fact include:

- That Nessies could have been trapped in Loch Ness in the primordial past, somehow surviving the Ice Age there (**IV**).
- That the Spicers' description of their land sighting gave the Monster the identity of a plesiosaur (**XII**). Their description was not plesiosaur-like.
- That the Gray photo (Figure 9) is "little more than a wake or wave" (**XVI**), or that it shows a Labrador dog (**VIII, XI**), sometimes described as with a stick in its mouth or rolling in shallow water. It is also a misinterpretation if not error of fact that Gray may have fabricated his photo to capitalize on prizes being offered for photos (**XIII**); actually, he had left the undeveloped film in his camera for weeks (Whyte, 1957: 2–4).
- That it was the Surgeon' s photo—published in April 1934—that set off the international furor (**X**) that had actually begun six months earlier. By contrast, **XV** asserts (also incorrectly) that the Surgeon' s photo was obtained under intense public competition for photos.
- That the capture of a live coelacanth in 1952 primed the public to take the Loch Ness Monster seriously again (**XIII**). Actually, the first coelacanth had been identified in 1938, and the interest in the Loch Ness Monster was revived after World War II by Constance Whyte' s book published in 1957.
- That the Dinsdale film has been successfully duplicated by filming a boat (**XV**). Only one still from that attempt is shown. It does not look

like Dinsdale' s hump, not least in being motionless without a wake, and proves at best only that unfocused photographs of a distant object may be indistinct and difficult to identify.

- That the Loch Ness Investigation of the 1960s was a venture by a generation of protesters, to vindicate human nature over academic arrogance, intent as much to discredit established science as to solve a zoological mystery (**XIII**). The LNI had been organized by David James, something of an Establishment figure as a Member of Parliament, whose family had an estate on the Isle of Mull and who was a hero of one of the famed escapes of prisoners of war from German custody. The Board of Directors of the LNI included several other respectable Establishment figures.
- That photographer Charles Wyckoff had pronounced the published flipper photographs as retouched (**VIII**) in a statement signed in 1989 (**XVII**). But Wyckoff (1984) had earlier also written that "the Academy of Applied Science has never produced or released a single 'JPL computer enhanced photograph' with the slightest bit of 'retouching' or change". As pointed out in Bauer (2002), this discrepancy is only an apparent one. **XIV** reproduces (1) the original transparencies which show the medial "spine" and adjoining portions of the flippers; (2) a computer enhancement in which these portions of the flipper are seen to form a connected surface with clear proximal edges but only indistinct distal ones; and (3) a supposedly retouched version similar to commonly published ones, in which the distal edges of the flipper have been made sharper and more distinct. Wyckoff attested the authenticity of (2), which is in itself quite sufficient to make the case that large flippers were filmed. For those with access to the original transparencies themselves, (1) is already convincing, for the outlines of the flippers are adequately visible in them even before computer enhancement (Gillespie, 1980; Wyckoff, 1984).

  The credibility of **XVII** as to Wyckoff' s opinions about retouching is hardly enhanced when mention of him is accompanied by shots not of him but of Sir Peter Scott, not merely once but in two distinct settings. Nor is the program' s credibility enhanced when it presents as possibly genuine several photos that no one else takes seriously and that show something like an ossified eel or an automobile bumper.
- That the 1975 underwater body-neck photo was regarded even by the most skeptical as indicating a large animal in the loch (**IV**). This then gives excessive weight to critiques of those 1975 photos, for example, that all of them—obtained at intervals of hours—are of the bottom of the loch (**XIII**) just because one of them is. In point of fact, of 6 photos obtained in 1975, 3 resemble eyewitness descriptions of Nessies, two are enigmatic but could be so interpreted, and only one clearly shows a sandy bottom.
- That the 1975 underwater "gargoyle" photo (Figure 6) bears an "uncanny resemblance" to a rotting tree stump (**XI**).

Program Themes

Any program about the Loch Ness Monster—or about any other such anomalistic subject—will seek to take advantage of the widespread public interest in unusual, mysterious matters. But producers typically look for some other special angle as well, and sometimes in the attempt to be different or special, they may also mislead.

In some cases, it is perhaps more a matter of over-reaching than of outright deception. **IV**, for example, culminates with film of a string of large bubbles that the production team allegedly observed in the same place where strange sounds had also been recorded; the knowledgeable Nessie buff can only respond, "So what?!" Similarly, **X** features the Loch Ness Submarine as though it were a serious Nessie-hunting tool, said to be the latest in 25 years of searches by submarine. In reality, submarines have been very little used, and the Loch Ness Submarine was intended primarily to make money by offering underwater trips to tourists. Nevertheless, **X** reports rather breathlessly that strange underwater sounds were picked up, perhaps seals but possibly Nessies; and even more portentously reports that sudden dust clouds were observed on the bottom as though something large had scurried away. Again perhaps best described as over-reaching is the claim made in **IX**—and nowhere else—that the Surgeon's photo was computer-enhanced in the 1990s to reveal a little white object in front, a source of ripples, indicating that maybe the neck was being towed—or maybe it was just a blemish on the negative.

However, several of the programs (**I, II, V, VI, VIII, X, XI**) do put the investigation of mysteries into reasonable context: that mysteries are not only interesting but that the attempt to elucidate them often leads to the gaining of genuinely new knowledge. Some of the documentaries focus specifically on mainstream science at Loch Ness: science is looking for biological evidence behind the legend (**XII**); the DeepScan sonar survey was "sweeping the Loch safe for science" (**XIII**); "science discovers Loch Ness" according to **IX**, studying the food chain and using the loch' s pristine populations of nematode worms as a baseline for studying pollution in other parts of the globe.

A number of the programs are tied to specific expeditions. **IV** was filmed when both the Academy of Applied Science and the National Geographic Society were at work (and the producers describe themselves as a third expedition). **VII** features a "new expedition this month" following the previous year's Operation DeepScan. **X**, as mentioned above, misleads by featuring the Loch Ness Submarine as a serious search for Nessies. **XIV** reports honestly an expedition by Rines and Wyckoff (the Academy of Applied Science). **XV** interweaves the Loch Ness quest with a contemporaneous expedition at Lake Seljord in Sweden, and **XVII** features those Swedish hunters in a jaunt at Loch Ness, described misleadingly as the largest expedition for years with the most advanced optical-avoidance sonar ever used, which could supposedly distinguish fixed inanimate objects from living ones. **III** is in a class by itself

for misleading viewers, deliberately and unscrupulously, by featuring an expedition that is plainly faked. Purportedly underwater at Loch Ness, the expedition via submarine is supposedly using a hydrophonically triggered sonar plate (whatever that may be) to track the monster without disturbing it with strobe lights. But the venue is quite obviously elsewhere than Loch Ness, for the water is clear and there are prolific growths of kelp and weeds. The video culminates with a glimpse of a large body said to be 5 times the size of the submarine (a fin can be glimpsed momentarily that looks like a whale's). Viewers are told that this is the "first known motion picture of its kind", that sounds were also picked up, and that there is every reason to believe that the answer to the mystery is near at hand. Viewers are further misled by being told that (unspecified!) tests have shown that monster wakes are distinctly different from seal wakes. Remarkably, this 2-hour film manages to be boring as well as misleading. Who could the intended audience have been? To be treated to shots of bears chasing salmon, a reminder that bears hibernate, and the comment that Nessies, which also eat salmon, therefore perhaps also hibernate? Scientists, the film claims, are looking into this connection!

Also deceptive in an apparently deliberate fashion is **XVII**, which culminates in feigned excitement over the discovery; strangely just when the documentary was being filmed, of two huge eels. Not in Loch Ness, but on the shore, conveniently at one of the largest lay-bys (parking areas) along the main road. Viewers are treated to an autopsy that reveals mackerel in the stomach of one of the eels, proving it came from the sea. A local expert explains that this shows that sea creatures may sometimes be found on the shores of Loch Ness! In the same program, Web-cams are mentioned that permit people anywhere on the Internet to keep watch over the waters of Loch Ness. A claimed monster photo taken from a computer screen in this fashion is shown, together with an elaborate re-enactment with boats and sighting tools to demonstrate that the Web-cam photo was likely of a boat. If the program were being honest, it would make plain that the view provided by the Web-cams delivers via the Internet so small an image that one is fortunate to be able to make out a boat at all, let alone be able to distinguish one from a monstrous neck or hump. Far too much is made in the same program of the assertion by a cruise-boat captain (Richard McDonald of *Cruise Loch Ness)* to have found deep caverns in which large sonar contacts are sometimes made—caverns that the featured expedition could not even find despite its "most advanced optical-avoidance sonar ever used" (above).

One program (**X**) had as central theme the revelation that the Surgeon's photo was a hoax. Another (**XVI**), shown on the Travel Channel, was—appropriately for the intended audience—slanted toward prospective tourists.

Why the Inadequacies?

Only two (**VIII**, **XIV**) of the sixteen programs directed at an adult audience (**II** to **XVII**) get most things right, present respectively 90% and 65% of the

strongest objective evidence for the existence of Nessies, and project a neutral opinion as to whether they exist. Why are the other programs so unsatisfactory, both in absolute terms and in comparison to these two?

XIV was a NOVA program, and NOVA productions aim perhaps uniquely to make sound and instructive documentaries, under the auspices of non-commercial television and funding. The script for **VIII** was written by a long-time insider to the subject, Tony Harmsworth, whose initially naive and strong belief has been tempered by experience and the influence of a strongly skeptical colleague, Adrian Shine. Such a useful combination is unlikely to be sought by commercial producers whose airn is to attract a wide audience by offering entertainment, if need be at the cost of pedagogical accuracy. As a journalist and columnist recently observed (Samuelson, 2001: xxi-xxii): "There has been a blurring between news and entertainment" owing to the influence of television[8]; "the way we, as a society, increasingly organize and present information leads—systematically and almost predictably—to misinformation". There is a "common distortion of reality, which is not—however—typically the result of deliberate lies".

The ideal program about an anomalistic subject would present the strongest evidence and the best arguments against that strongest evidence. As to Loch Ness Monsters, one might show examples of eyewitness testimony, doubtful photos, and the like and have competent people argue both sides. Hoaxes need to be mentioned, but it also needs to be pointed out that hoaxes don't disprove the central claim; consider that there were hundreds of hoaxes about anthrax in the United States in 2001, but that does not gainsay that several letters actually were laced with dangerously infective anthrax. But such an approach makes considerable intellectual demands on the audience; the typical producer's ambition to attract as wide an audience as possible entails by contrast a certain amount of dumbing down.

A second factor that colludes against an ideal documentary on an anomalistic subject is the lack of time or resources, or both, that are typically available. I have been consulted several times by media people "researching" TV programs or preparing talk shows. I continue to be taken aback at the lack of background knowledge they acquire before getting in touch with me, and by their failure thereafter to follow up my suggestions intended to help them understand what it is all about. I have had on my answering machine messages from reporters asking me to call them back; but when I did, at the latest the following day, this was often later than the deadline for filing their story. For some special programs, of course, the reporters may have a longer lead time: I once had a call from CNN for a program they planned to broadcast five days later.

Even when programs are in the works for months, the supporting research may be rather cursory. I was consulted at some length by telephone in connection with two of the 1-hour documentaries about Nessies. The researchers knew of my book (Bauer, 1986), but they had not gone so far as to actually look into it

very far, let alone deeply. It was also clear from their enquiries that nothing I could say would alter what had already been decided about the approach and tone of the program. One producer confessed later that they would have adopted a different approach, had they known before they began filming what they had learned by the time the program was finished. The interpretive cart, in other words, had been in harness well before the substantive horse.

Gary Mangiacopra, whose knowledge about sea serpents and monsters is as comprehensive as anyone' s, has given me permission to quote his own experience (Mangiacopra, 2001):

Regarding television shows on Nessie. Frankly, my opinion after dealing with six tv companies over the past 20 years is rather low. They tend to be going more for the controversy to amuse their tv viewers, and frankly, most ... more bluntly, all of the company researchers have no idea of really what is going on or interest in the topic. It is another assignment to be done within their budget and time. In effect, I called it, McDonaldland. Mass produce shows on a regular basis, and their quality suffers. My appearance on HISTORY MYSTERIES last March I thought was a near comedy. I had a script they wanted me to cite, which I did, did a lot of research and work for them, loaned them my original slides for their show... and I got no financial gains for my efforts! (I got a video copy of the show for all of my efforts for them!)

Shorter pieces about Loch Ness Monsters that one sees on television news when something is happening at Loch Ness, or that form small parts of programs dealing with some collection of subjects, are—predictably—on the whole less satisfactory even than the fuller-length documentaries. For example, six to seven minutes about Nessies in the half-hour Discovery Channel program *Those Incredible Animals—Loch Ness Quest)* featured mainly the 1987 DeepScan sonar sweep; it states that some inconclusive films have been obtained, shows the 1936 Irvine footage that most knowledgeable people regard as spurious, but fails altogether to mention the Dinsdale film.

I have not tried in this essay to assess the numerous—or perhaps innumerable—other snippets about Nessies that appear quite frequently on television. I do have video recordings of a couple of dozen television pieces in which Nessies are given a few sound- or video-bites. As one might expect, it is more or less a matter of chance whether the information provided is sound or unsound. Yet these television appearances, short but more frequent than the full documentaries, are likely to be quite influential and to reinforce the generally misguided state of public knowledge about the subject.

A certain amount of file footage seems to be borrowed between programs. Eyewitness testimonies in several of the programs seem to be identical in substance and locus of the interview. Much of the 10-minute segment about Nessies in *Bigfoot: The Mysterious Monster,* produced by Robert Guenette for Schick Sun Classic Pictures, is taken from the Wolper production, **II**.

I suspect that analysis of television coverage of other anomalistic subjects would reveal similar characteristics: a small proportion of relatively informed, sound, and neutral-toned pieces amid much that is misleading, shallow, and

wrong on points of fact. The lesson, which will not be news to anomalists, is that the public is little exposed to sound information about anomalies and unorthodoxies.

Notes

[1] Two (**I, III**) were initially produced as commercial films and another (**VIII**) as a commercial video.

[2] *Loch Ness,* filmed in 1994 and shown in 1996, starring Ted Danson and Joely Richardson.

[3] Kodak had magnified some portions of the 16-min film for Dinsdale. BBC television transferred the 16-mm film onto 35-mm, and further magnified some portions of it. The version Dinsdale typically showed in his lectures included a magnified portion of the third segment that made clearer the oar-like splashes accompanying the wake.

[4] By the Jet Propulsion Laboratory and for **IX**, **XIII**, and **XIV**.

[5] The film makes the commendable, pedagogically appropriate points that monsters stemmed from human imagination long ago but that some stories of monsters may have substance. Nothing stimulates like mysteries. Knowledge comes from evidence, imagination, investigation.

[6] See, for example, "Searching for the Mothman", shown on cable-television channel FX on 23 January 2002.

[7] That revelation is not believed by a number of people, including the author of this essay; see Bauer (2002).

[8] One rather obvious indication that news is designed to entertain is the determination of news anchors to smile at their audience no matter what depressing words they read out to us. For several years I have observed in some wonderment the attempt by such people as Dan Rather to smile at the same time as they are talking, which is impossible and results in a variety of awkward or incongruous facial expressions.

[9] I taped it on 22 January 1994. It is narrated by Loretta Swift, copyright Westinghouse 1991.

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